

1 CLAIMS

2 What is claimed is:

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4 Claim 1. An intra-operative method for essentially
5 eliminating post-operative pain associated with a surgical
6 procedure comprising the steps of;

7 a) providing a medicated solution formulated for intra-
8 operative use which is a mixture of an injectable anesthetic,
9 epinephrine, sodium chloride and an injectable anti-
10 inflammatory agent; and

11 b) administering predetermined amounts of said medicated
12 solution intra-operatively to selected sites within the
13 boundaries of a surgical field;

14 whereby post-operative pain associated with said
15 surgical procedure is essentially eliminated.

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17 Claim 2. The intra-operative method in accordance with
18 claim 1 wherein said injectable anesthetic is selected from
19 the group consisting of bupivacaine, levobupivacaine,
20 ropivacaine, dibucaine, procaine, chloropropane, prilocaine,
21 mepivacaine, etidocaine, tetracaine, lidocaine, xylocaine or
22 mixtures thereof and said injectable anti-inflammatory agent
23 is selected from the group consisting of ketorolac
24 tromethamine, propecatamol or mixtures thereof.

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1 Claim 3. The intra-operative method in accordance with
2 claim 1 wherein said injectable anesthetic is levobupivacaine
3 and said injectable anti-inflammatory agent is ketorolac
4 tromethamine.

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6 Claim 4. The intra-operative method in accordance with
7 claim 1 wherein said predetermined amount comprises
8 approximately 5cc of said medicated solution.

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10 Claim 5. The intra-operative method in accordance with
11 claim 1 wherein said administering of said medicated solution
12 utilizes a hollow shaft having a proximal end and a distal
13 end, wherein said medical solution flows within said shaft
14 from said proximal end toward said distal end, which distal
15 end is defined by a solid end having a plurality of
16 circumferentially positioned apertures in said shaft for
17 providing radially directed flow of the medicated solution
18 circumferentially about said shaft.

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20 Claim 6. The intra-operative method in accordance with
21 claim 5 wherein said hollow shaft is an 18 gauge spinal
22 needle.

1 Claim 7. The intra-operative method in accordance with
2 claim 1 wherein said surgical procedure is selected from the
3 group consisting of a total hip replacement (THR), a total
4 knee replacement (TKR) and a UNI knee replacement.

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6 Claim 8. A kit for carrying out an intra-operative
7 method for essentially eliminating pain associated with a
8 surgical procedure comprising;

9 a combination of ingredients including an injectable
10 anesthetic, epinephrine, sodium chloride and an injectable
11 anti-inflammatory agent calculated for specific patient
12 weights; and

13 a means for administering said medicated solution to a
14 surgical field, said means comprising a hollow shaft spinal
15 needle.

16
17 having a proximal end and a distal end, wherein upon
18 administration, said medical solution flows within said shaft
19 from said proximal end toward said distal end, which distal
20 end is defined by a solid end having a plurality of
21 circumferentially positioned apertures in said shaft for
22 providing radially directed flow of the medicated solution
23 circumferentially about said shaft.

1 Claim 9. The kit in accordance with claim 8 wherein said
2 injectable anesthetic is selected from the group consisting
3 of bupivacaine, levobupivacaine, ropivacaine, dibucaine,
4 procaine, chloropropane, prilocaine, mepivacaine, etidocaine,
5 tetracaine, lidocaine, xylocaine or mixtures thereof and said
6 injectable anti-inflammatory agent is selected from the group
7 consisting of ketorolac tromethamine, propecatomol or
8 mixtures thereof.

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10 Claim 10. The kit in accordance with claim 8 wherein
11 said injectable anesthetic is levobupivacaine and said
12 injectable anti-inflammatory agent is ketorolac tromethamine.

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14 Claim 11. The kit in accordance with claim 8 wherein
15 said hollow shaft is an 18 gauge spinal needle.

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17 Claim 12. The kit in accordance with claim 8 wherein
18 said hollow shaft has a proximal end and a distal end,
19 wherein upon administration, said medical solution flows
20 within said shaft from said proximal end toward said distal
21 end, which distal end is defined by a solid end having a
22 plurality of circumferentially positioned apertures in said
23 shaft for providing radially directed flow of the medicated
24 solution circumferentially about said shaft.

1 Claim 13. An intra-operative method for essentially
2 eliminating pain associated with a surgical procedure
3 performed in a patient weighing less than 160 pounds
4 comprising the steps of;

5 a) mixing 50 ml of 0.5% levobupivacaine with 0.5 ml
6 epinephrine diluted 1:1000;

7 b) diluting the solution obtained in step a to 100 ml
8 wherein the concentration of levobupivacaine is 0.25%;

9 c) removing 40 ml of the solution obtained in step b;

10 d) discarding 20 ml of the solution removed in step c
11 and setting aside 20 ml of the solution removed in step c;

12 e) adding 60 mg of ketorolac tromethamine to the
13 remaining 60 ml of solution of step c;

14 f) injecting into a subcutaneous layer around a surgical
15 incision the 20 ml of solution set aside in step d via a
16 needle using about 4 single injections of approximately 5cc
17 each; and

18 g) injecting into multiple areas within said surgical
19 incision the solution of step e via a needle using about 12
20 single injections of approximately 5cc each;

21 whereby pain associated with said surgical procedure is
22 essentially eliminated.

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1 Claim ~~13~~. The intra-operative method in accordance with
2 claim 12 wherein injection is through a hollow shaft having a
3 proximal end and a distal end, wherein upon administration,
4 said medical solution flows within said shaft from said
5 proximal end toward said distal end, which distal end is
6 defined by a solid end having a plurality of
7 circumferentially positioned apertures in said shaft for
8 providing radially directed flow of the medicated solution
9 circumferentially about said shaft.

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11 Claim ~~14~~. The intra-operative method in accordance with
12 claim 12 wherein injection is through a hollow shaft which is
13 an 18 gauge spinal needle.

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15 Claim ~~15~~. The intra-operative method in accordance with
16 claim 12 wherein said surgical procedure is selected from the
17 group consisting of a total hip replacement (THR), a total
18 knee replacement (TKR) and a UNI knee replacement.

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20 Claim ~~16~~. An intra-operative method for essentially
21 eliminating pain associated with a surgical procedure
22 performed in a patient weighing 160 pounds or more comprising
23 the steps of;

24 a) mixing 50 ml of 0.5% levobupivacaine with 0.5 ml

1 epinephrine diluted 1:1000;

2 b) diluting the solution obtained in step a to 100 ml
3 wherein the concentration of levobupivacaine is 0.25%;

4 c) removing and setting aside 20 ml of the solution
5 obtained in step b;

6 d) adding 60 mg of ketorolac tromethamine to the
7 remaining 80 ml of solution of step c;

8 e) injecting into a subcutaneous layer around a surgical
9 incision the 20 ml of solution set aside in step c via a
10 needle using about 4 single injections of approximately 5cc
11 each; and

12 f) injecting into multiple areas within said surgical
13 incision the solution of step d via a needle using about 16
14 single injections of approximately 5cc each;

15 whereby pain associated with said surgical procedure is
16 essentially eliminated.

17 18.

18 Claim ¹⁷17. The intra-operative method in accordance with
19 claim ~~16~~ wherein injection is through a hollow shaft having a
20 proximal end and a distal end, wherein upon administration,
21 said medical solution flows within said shaft from said
22 proximal end toward said distal end, which distal end is
23 defined by a solid end having a plurality of
24 circumferentially positioned apertures in said shaft for
25 providing radially directed flow of the medicated solution

1 circumferentially about said shaft.

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3 Claim ¹⁷18. The intra-operative method in accordance with
4 claim ¹⁷18 wherein injection is through an 18 gauge spinal
5 needle.

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7 Claim ¹⁷19. The intra-operative method in accordance with
8 claim ¹⁷19 wherein said surgical procedure is selected from the
9 group consisting of a total hip replacement (THR), a total
10 knee replacement (TKR) and a UNI knee replacement.